

METAL-INSULATOR-METAL CAPACITOR AND METHOD OF FABRICATING SAME

ABSTRACT OF THE DISCLOSURE

5 A metal-insulator-metal (MIM) capacitor including a metal layer, an insulating layer formed on the metal layer, at least a first opening and at least a second opening formed in the first insulating layer, a dielectric layer formed in the first opening, a conductive material deposited in the first and second openings, and a first metal plate formed over the first opening and a second metal plate formed over the second opening. A method for fabricating the MIM capacitor, includes forming the first metal layer, forming the insulating layer on the first metal layer, forming at least the first opening and at least the second opening in the first insulating layer, depositing a mask over the second opening, forming the dielectric layer in the first opening, removing the mask, depositing the conductive material in the first and second openings, and depositing a second metal layer over the first and second openings. MIM capacitors and methods of fabricating same are described, wherein the MIM capacitors are formed simultaneously with the BEOL interconnect and large density MIM capacitors are fabricated at low cost.

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